

Bridge Inspection									
Bridge File Number	01074 -1 Bridge				Form Type	SG			
Year Built/Year Supstr	1946/1946				Lot No.	1			
Bridge or Town Name	LETHBRIDGE				Inspector Name	Randy Bredo			
Located Over	14219:02 C1 0.267;OLDMAN RIVER, 2.12, WATERCRS-ST				Inspector Class	BR CLS A			
Located On	3:09 R1 2.183;3:09 L1 2.189				Assistant Name				
Water Body Cl./Year					Assistant Class				
Navigabil. Cl./Year					Inspection Date	19-Jun-2012			
Legal Land Location	NW SEC 1 TWP 9 RGE 22 W4M				Data Entry By	Lauren Korte			
Longitude, Latitude	-112:51:55, 49:42:28				Data Entry Date	17-Oct-2012			
Road Authority	Alberta Transportation (AIT)				Reviewer Name	Garry Roberts			
Contract Main. Area	CMA25				Review Date	04-Oct-2012			
Clear Roadway/Skew	19.2 /				Dept. Reviewer Name	Tim Davies			
AADT/Year	25,880 / 2011 (A)				Dept. Review Date	22-Oct-2012			
Road Classification	RAU-211.8-110				Follow-Up By				
Detour Length (km)	4								
Allowable Load (t):	Single		Semi		Train				----> On Critical Spans ---->Critical Member
Design Loading:	HS20					----> Primary Span			

Posting Information												
Required Vert. Clearance Posting (m)	UNDER: 14219 C1 3.9m											
Posted Vertical Clearance (Y/N)	Yes											
Posted:	Lane	NB	On Bridge (m)	4.1	In Advance (Y/N)	No	Lane	SB	On Bridge (m)	4.1	In Advance (Y/N)	Yes
Remarks	(Measured 4.18 @ Int span SB curb lane. 4.6m @ ext. spans.) May 21/08											
Required Load Posting (t)	Single				Semi				Truck Train			
Posted Loading (t)	Single				Semi				Truck Train			
Posted:	Lane	EB	At Junction (Y/N)	No	In Advance (Y/N)	No	At Bridge (Y/N)	No				
Posted:	Lane	WB	At Junction (Y/N)	No	In Advance (Y/N)	No	At Bridge (Y/N)	No				
Remarks	Not required.											
Hazard Marker At Bridge (Y/N)	No											
Remarks												
Other Sign Types	River ID, no bike, no ped on WB. 80KM/hr on EB, 100km/h WB											

Utilities (Located at)									
Utility Attachments	GAS UTILITIES-GAS LINE; OTHER UTILITIES-OTHER LINES; TELEPHONE UTILITIES-PHONE LINE; POWER UTILITIES-POWER LINE								
Telephone	North side, 6 conducts @ G7G8				Gas	North & South.			
Power	4 wires crossing 30m East.				Municipal				
Others	Street light on medium.				Problem (Y/N)	Yes			
Remarks	U-clamp on gas line broken @ NE and NW								

Approach Road				
		Last	Now	Explanation of Condition
Horizontal Alignment		7	6	Curve West end.
Vertical Alignment		7	6	Hill to East.
Roadway Width (m)	19.000			W/B recently paved. Small pothole E/B East end.
Approach Bump		4	4	
Guardrail (Y/N)	Yes			Not thriebeam at SE and NW.
Guardrail		5	4	Thriebeam + steel I-posts at NE and SW.
Length (m)	30.000			Wrong lap at NW and SE.
Current Standard (Y/N)	No			
Termination Type	FLARE END			
Drainage		6	6	

Approach Road					
		Last	Now	Explanation of Condition	
Approach Road General Rating		7	6		
Superstructure					
Bridge Component		Last	Now	Explanation of Condition	
(Primary Span : RG (WG) , 8 Spans, Lengths(m): 24.5-32.1-32.1-32.1-32.1-32.1-24.5, A-Ident Number: A0182-01)					
Special Features					
Special Feature			X		
(Type :)					
Special Feature			X		
(Type :)					
Wearing Surface/Deck Top Detail Ratings					
	N (%)	1 (%)	2 (%)	3 (%)	
Last	0	0	0	0	
Now	0.0	0.0	0.0	0.0	
Wearing Surface		5	5	High density EB, 2 - 3mm cracks SF fibre WB. Medium transverse cracks @ 05m -1.0m O/C all spans.	
(Material Type : CONCRETE)					
(Thickness(mm) : 50)					
Deck Top		N	N		
Deck Rideability		7	7		
Deck Joints		4	4	Rate 4 due to leak comment. (Both joint leak) 12 Nov 2011.	
Temperature (deg. C)		15			
(Expansion Type : ARMoured GLAND (WABO UNDER FINGER OR SLIDING PLATES))					
(Fixed Type :)					
Gap Size (mm)		Gap Location			
60		NE abut			
75		NW abut			
90		SW abut			
40		SE abut			
Deck Drainage		4	4	Drains sealed off @ South gutter by concrete barrier @ South. Drains open @ median. Active leakage at A1 plumbing.	
Drains Clogged (Y/N)		No			
Curbs/Median		3	5	Typical vertical cracking on median. Water & efflorescence on curb undersides, Medium transverse cracks @ 1.0m WB curb. Jersey concrete barriers at South curb.	
(Curb Type : Standard)					
Scaling (Percent Area)		5			
Bridge Rail		4	4	Damaged midrails at Sp 5 WB - Minor and ST at E/B bent 100mm. 1 missing bolt. Insufficient threads @ SE post. Behind barrier at SE @EXP RAIL. Section of rail missing at S2 North. Rebar installed in place off rail.	
(Type : GALVANIZED STEEL BRIDGE TUBE)					
Bridge Rail Posts		4	4		
(Type : GALVANIZED POST STEEL;GALVANIZED POST STEEL)					
Bridge Rail/Posts Coating		7	6		
(Type : GALVANIZED)					
Sidewalk		7	7		

Superstructure							
Bridge Component		Last	Now	Explanation of Condition			
(Primary Span : RG (WG) , 8 Spans, Lengths(m): 24.5-32.1-32.1-32.1-32.1-32.1-24.5, A-Ident Number: A0182-01)							
Girder/Beam							
Cover Plate		4	4	Corrosion stresses bending & some loss of section of coverplates.			
Flange		3	5	(4 flanges have repaired cracks.)			
Web		4	5	Minor high loud scrapes Sp.8-G1 and G2.			
Stiffeners		4	5	(Welds are poor leaving weak heat affected zone with history of cracking). See 2012 Level 2 inspection for details.			
Splice		7	5				
Weld		3	5				
Diaphragms/Cross Frame		5	5				
Paint Condition		4	4	Spot rust on exterior girders.			
(Colour Description : BLUE)							
(Colour Code : 15182)							
Touchup Required (Y/N)		No					
Bearings		6	3	Rocker bearings @ WB. roller nest & D&D @ EB. Pinned fix @ P4. 25% corrosion. (No connection between masonry plate & superstructure - missing anchor nuts on some bearings.) Rollers have lost curves and flattened out.			
Temperature (deg. C)		15					
(Expansion Type : ROLLER NEST BEARING)							
(Fixed Type : PINNED BEARING)							
Coating Adequate (Y/N)		No					
Functioning (Y/N)		Yes					
Deck Underside		5	5	Transverse crack staining prior to new overlay.			
Stains (Percent Area)		2					
Span Alignment Problems							
Vertical (Y/N)		No					
Horizontal (Y/N)		No					
Superstructure General Rating		3	3				
Substructure							
Bridge Component		Last	Now	Explanation of Condition			
Abutments							
Bearing Seats/Caps		6	6	Narrow vertical cracks at East abutment backwall / breast wall.			
(Type : CONCRETE)							
Backwalls/Breastwalls		5	5	Wide crack at NW backwall.			
Wingwalls		5	5	Heavy scaling at SW - 1.5m long at top.			
Piles		N	N	Buried.			
Paint/Coating		X	X				
Abutment Stability		7	7				
Scour/Erosion		5	6				
Piers/Bents							
(Type : PIER-SOLID)							
Bearing Seats/Caps		6	6	3mm to 5mm wide vertical crack @ construction joints of piers. Massive piers.			
(Type : CONCRETE)							
(Total Number of Bearing Piles : 0:0:0:0:0:0)							
Pier Shaft/Piles		5	6				
Bracing/Struts/Sheathing		X	X				
Nose Plate		7	7	Nose PL @ P3 to P6 only.			

Substructure				
Bridge Component		Last	Now	Explanation of Condition
Paint/Coating		5	5	Parging and graffiti covered. Tight corrosion at nose plates.
(Colour Description :)				
(Colour Code :)				
Pier Stability		8	8	(Scoured around P3, P4 & P5) - submerged Minor debris @ P4.
Scour		N	N	Water to dark and high to see scour.
Debris (Y/N)	Yes			Drift at P4- minor.
Substructure General Rating		5	6	
Structure Usage				
		Last	Now	Explanation of Condition
Channel				
(U/S Direction : S)				
(D/S Direction : N)				
Alignment		7	7	
Bank Stability		4	4	Vertical banks at East.
HWM (m below Top of Curb)	4.0			No visible HWM. Minor.
Drift (Y/N)	Yes			
Slope Protection		5	5	
(Type : NATURAL; NATURAL)				
Guidebank/Spurs		8	7	Conc SP @ P7 only, remainder natural.
Adequacy of Opening		8	8	
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		4	4	
Grade Separation				
Road Alignment		6	6	
Traffic Safety Features		7	4	Wrong lap at NE.
Type	Guardrail			
Slope Protection		5	5	Steel Binwall at East. Corrosion perforations- isolated.
(Type : NATURAL; NATURAL)				
Bank Stability		5	6	
Drainage		7	7	
Grade Separation General Rating		5	6	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
REPAIR/REPLACE BRIDGE RAIL	2012	Install 3.2m section of rail. 50mm Sq. at S2 at W/B.					
GALVANIZE/PAINT BRIDGE RAIL							
RETROFIT BRIDGE RAIL							
SEAL CURBS							
PATCH DECK							
SEAL DECK							
OVERLAY DECK							
REPAIR/REPLACE DECK JOINTS	2012	Investigate and repair leakage at abut plumbing.					
RESET/ PAINT BEARINGS	2012	Replace all expansion bearings.					
REPAINT SUPERSTRUCTURE							
STRAIGHTEN/REPLACE MEMBERS							
WASHING							
SHOTCRETE REPAIRS							
REPAIR ABUTMENT SCOUR/EROSION							
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION							
OTHER ACTION	2012	Paint / seal stress corrosion areas @ exterior girders.					
OTHER ACTION	2012	Repair U-clamp at NE and NW at gas line.					
OTHER ACTION	2012	Fill open holes with bolts.					
OTHER ACTION							
OTHER ACTION							
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Structural Condition Rating (Last/Now) (%)	44.4/50.0	Sufficiency Rating (Last/Now) (%)	44.2/46.6	Est. Repl. Yr	2043	Maint. Req'd. (Y/N)	Yes
Special Comments for Next Inspection			Department Comments				
Maintenance Reviewed By			Date			Estimated Total	0
Proposed Long-Term Strategy							
On 3-Year Program (Y/N)							

Proposed Action			
Previous Inspector's Name	Tom Carey	Previous Assistant's Name	
Next Inspection Date	19-Mar-2014	Previous Inspection Date	12-Nov-2011
Inspection Cycle (Default) (months)	21		
Comment			